



City of Richmond

Report to Committee

To Public Works & Transportation -

To: Public Works and Transportation Committee

Date: June 2, 2008

June 18, 2008

From: Robert Gonzalez, P. Eng.  
General Manager Engineering and Public Works

File: 10-6340-20-P.04301/Vol 01

Re: Intake Screens Upgrade at Horseshoe Slough

Staff Recommendation

1. That Council authorize the "Intake Screens Upgrade at Horseshoe Slough" project for \$380,000.
2. That transfer of \$380,000 from the 2007 "Gilbert North Drainage Area" Project (40341) be approved to allow the "Intake Screens Upgrade at Horseshoe Slough" project to proceed.

Robert Gonzalez, P. Eng.  
General Manager Engineering and Public Works  
(604-276-4150)

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<b>ROUTED TO:</b>	<b>CONCURRENCE</b>	<b>CONCURRENCE OF GENERAL MANAGER</b>	
Budgets .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
Sewerage & Drainage .....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>		
<b>REVIEWED BY TAG</b>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	<b>REVIEWED BY CAO (Acting)</b>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

## Staff Report

### Origin

As part of the 2004 to 2006 Capital Program, staff completed drainage upgrade works throughout the Horseshoe area. Substantial drainage improvements have been achieved resulting in reduced flooding complaints. However, the drainage system still does not meet a 10-year storm event service level and recent findings and computer modelling indicates that the Horseshoe Pump Station Intake screens present a limitation and are in poor condition. See attached map for the locations of recently completed drainage improvements in the area and the proposed upgrades required at the Horseshoe Slough pump station.

The purpose of this report is to obtain Council authorization to complete the "Intake Screens Upgrade at Horseshoe Slough" capital project in 2008, in order to further improve the local drainage system.

### Analysis

The purpose of intake screens is to allow drainage pumps to work properly and ultimately to prevent flooding. They perform this function by stopping debris such as leaves and tree branches from entering the pumping area. This enables the maximum flow possible to reach the pump station. The screens are normally located immediately in front of the pump station and are accessible to maintenance staff so the collected debris may be easily removed.

Through the 2007 winter and early 2008 season, operations staff identified that the intake screens at the Horseshoe Slough Pump Station are nearing the end of their lifecycle, inhibit flow, and replacement would also enhance pump station operation.

As a result, it is anticipated that replacement of the pump station screens upgrade prior to this winter will result in further drainage improvements in the Horseshoe Slough area. Staff recommend that this work be completed during the upcoming dry season and are in a position to immediately tender this project once Council has given their approval.

The 2007 "Gilbert North Drainage Area" project is 50% complete and is anticipated to enhance the drainage capacity for developments south east of Westminster Highway and Garden City Road. Staff have determined that the remaining work will be completed in 2009 as a comprehensive drainage analysis and design for the balance of this project is not yet complete.

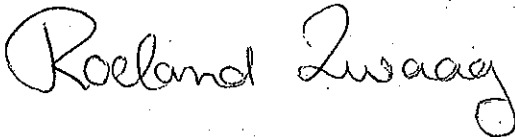
Therefore, staff are recommending the \$380,000 of funding be utilized for the "Intake Screens Upgrade at Horseshoe Slough" project and if additional funds are required for the "Garden City Drainage Area" project, staff will submit for Council consideration an additional project through the Capital Program review process.

**Financial Impact**

The financial impact to the City is the funding transfer of \$380,000 from the existing 2007 "Gilbert North Drainage Area" project be completed. No additional funds are required at this time.

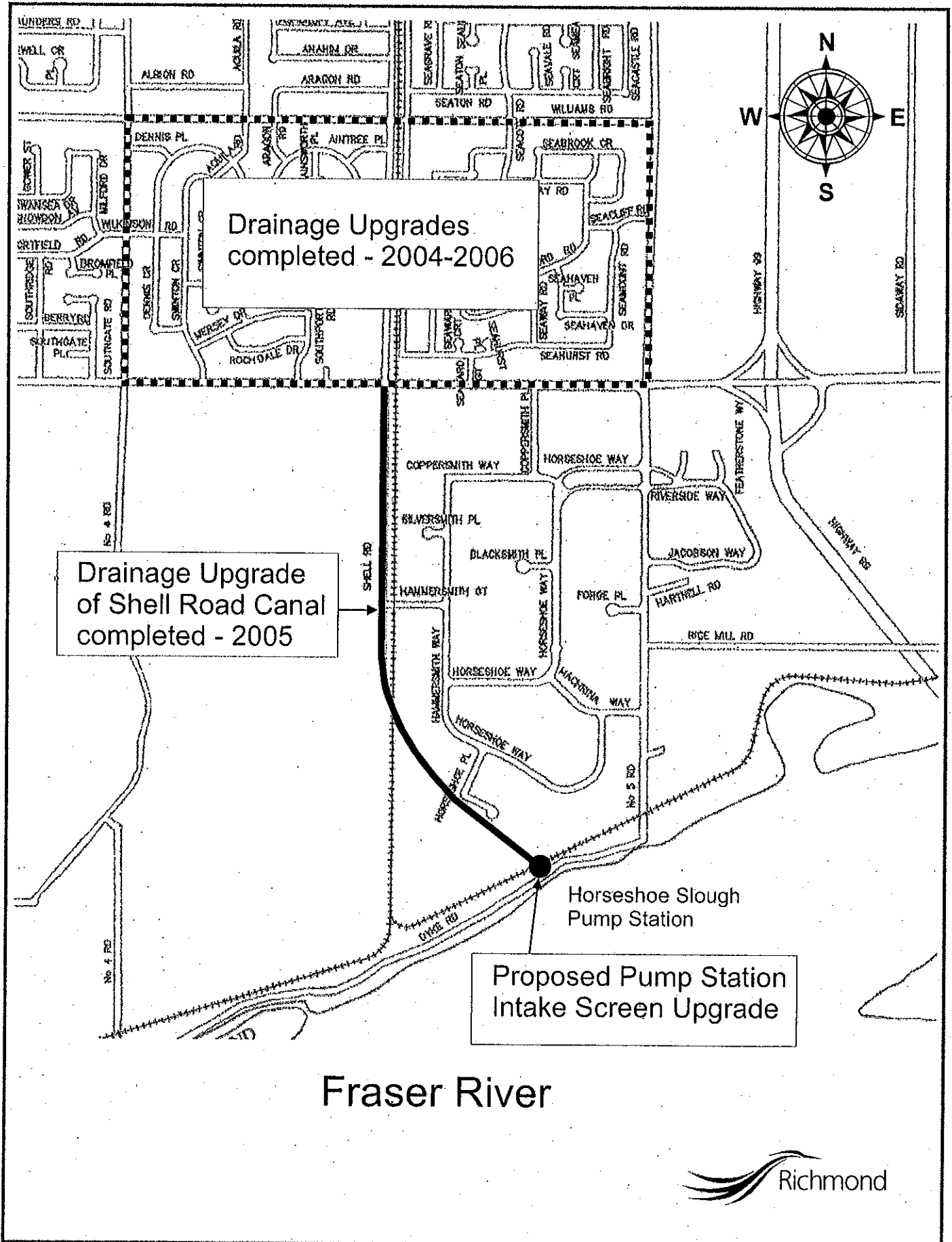
**Conclusion**

The Horseshoe Slough intake screens are at the end of its useful life. We request Council's authorization to complete a funding transfer of \$380,000 to complete the "Intake Screens Upgrade at Horseshoe Slough" project, which will enhance pump station operation and improve the performance of the local drainage system.



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RZ:rz



Drainage Upgrades  
completed - 2004-2006

Drainage Upgrade  
of Shell Road Canal  
completed - 2005

Proposed Pump Station  
Intake Screen Upgrade

Fraser River

